Technical Data Sheet

‘CONCRETE CANCER’ REPAIR IN SWIMMING POOLS

Overview: Concrete cancer may be experienced in older pools when concrete cracks, and water penetrates to the steel reinforcement deep inside the concrete. With emptying and refilling of swimming pools over time, and also thermal expansion and ground movement, minute cracks may occur in the concrete structure. The cracks then allow ingress of pool water down into the structure and in contact with the reinforcement. In turn the moisture causes the steel to rust. Rusting steel ultimately sheds its oxide skin forcing the rust layer to push against the surrounding concrete. If left untreated pieces of concrete may ultimately be dislodged, further accelerating the corrosion process.

Treatment: The services of an experienced concrete specialist should be sought for pools exhibiting major concrete corrosion. Once the pool has been properly assessed, the correct repair process can be established. In general this will involve:

- Removal of loose and damaged concrete.
- Clean concrete and water blast.
- Clean and remove all loose, rusted or damaged steel reinforcement
- Replace any steel reinforcement which is deteriorated beyond repair.
- Treat steel and exposed concrete surfaces with specialised priming products.
- Reinstate the void using high strength cementitious mix, or filled epoxy compound.
- Reinstate the surface quality commensurate with the finish of choice.

Epoxy vs Cementitious Repair? The decision will normally be based on a combination of the comparative costs of each process, and the speed by which the repair is required to be achieved. The difference in materials cost will be exaggerated for repairs of ‘large volume’.

- The high strength cementitious option will be lowest materials cost, however the time required for full cure, before which pool coatings can be applied, will be much extended.
- Epoxy repair techniques will be at higher materials cost, however the rapid cure will result in compatible linings/pool coatings able to be applied normally within 24 hours.
- A combination of cementitious and epoxy repair is often chosen by contractors.

Epoxy Repair using EPOXACOTE and LUXAPOOL products: Deep ‘cavity repairs’ may be carried out using EPOXACOTE HF as the concrete surface primer, and the same product extended using appropriate mineral extenders generally in accordance with ‘epoxy concrete repair techniques’. Refer to **‘EPOXACOTE HF Formulation Guidelines’**.
Thinner repairs and high quality re-surfacing are best achieved using LUXAPOOL SEF, premixed structural filler. Refer to the technical data sheet for **LUXAPOOL SEF**.
In both cases allow 24 hours cure before surface grinding using 40-60 Grit ‘ZEC Disc’. Then brush or vacuum away dust before application of **LUXAPOOL EPOXY FINISH**.

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